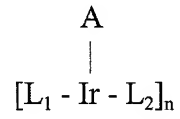
WHAT IS CLAIMED IS:

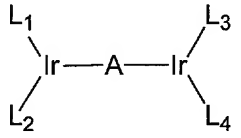
1. An emissive iridium(III) complex suitable for use in an emissive layer of an OLED and having the structure:



(I)

wherein L_1 and L_2 are heteroaromatic ligands having a carbon atom covalently bonded to the iridium atom and a nitrogen atom complexed to the iridium atom, and wherein A comprises n heteroaromatic ligand groups defined as for L_1 and L_2, bonding to the respective n iridium atoms, and n is 2-12.

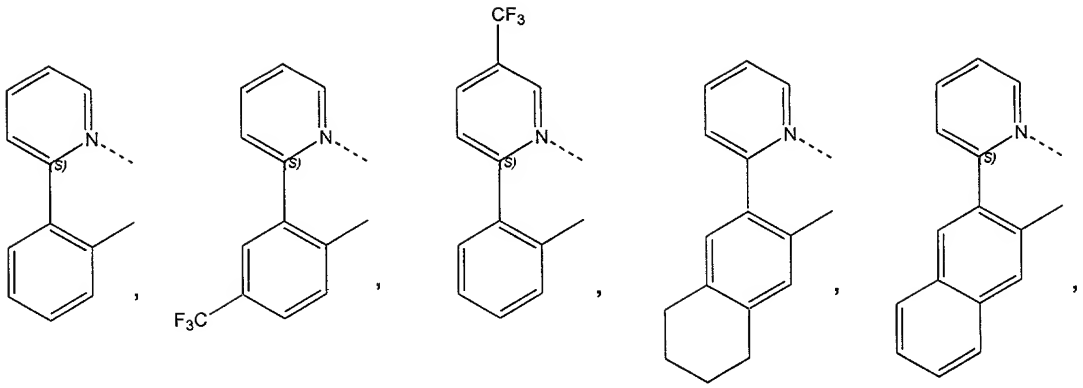
2. An emissive iridium (III) complex according to claim 1, having the formula:

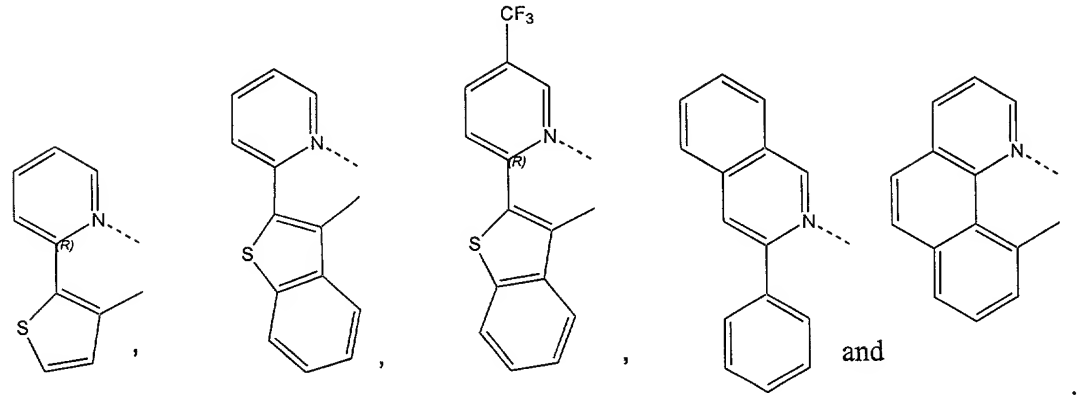


(III)

wherein A is a group L′-R-L′′ in which R is a divalent hydrocarbon radical, and L′ , L′′, L_1 L_2, L_3 and L_4, which may be the same or different, are heteroaromatic ligands having a carbon atom covalently bonded to the iridium atom and a nitrogen atom complexed to the iridium atom.

3. The iridium complex of claim 2, wherein L′ and L′′ are independently selected from the group consisting of:



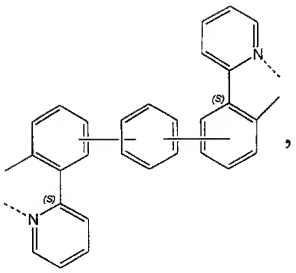
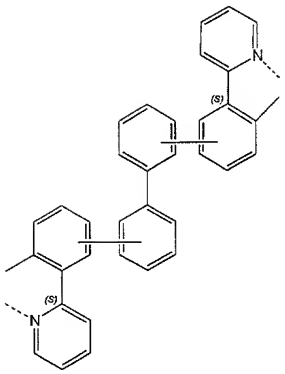
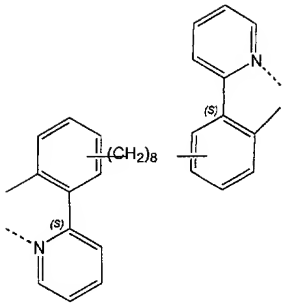


and .

4. The iridium complex of claim 2, wherein L′ , L′′, L_1 L_2, L_3 and L_4 are the same.

5. The iridium complex of claim 2, wherein L_1, L_2, L_3 and L_4 are the same and not the same as L′ or L′′.

6. The iridium (III) complex of claim 2, wherein A is selected from the group consisting of:


,

, and

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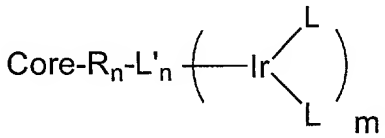
7. An organic light emitting device comprising an anode, a cathode and an emissive layer, wherein the emissive layer comprises the emissive iridium (III) complex of any of claims 1 to 6.

8 The organic light emitting device of claim 7, wherein said complex is doped in a host material in said emissive layer.

9. The organic light emitting device of claim 7, wherein said complex is not doped in a host material.

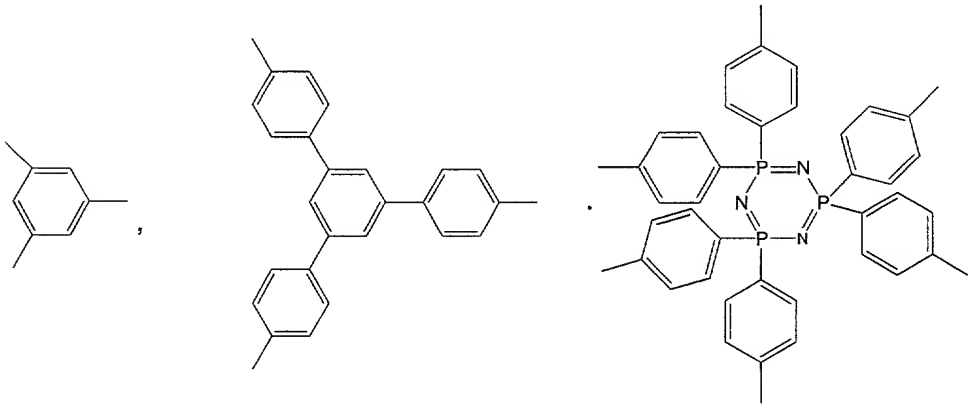
10. The organic light emitting device of claim 7, having a theoretical efficiency greater than 25 percent.

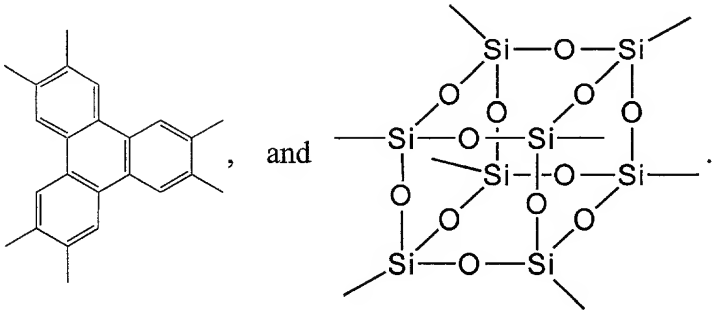
11. An emissive iridium(III) complex according to claim 1 having the structure


(IV)

where core is an m-valent radical, each Rn is a divalent hydrocarbon radical, L'n is a ligand having a carbon covalently bonded to the iridium atom and a nitrogen atom complexed to the respective iridium atom, and each ligand L, which may be the same or different, has a carbon covalently bonded to the iridium atom and a nitrogen atom complexed to the respective iridium atom

12. The emissive iridium complex of claim 11, wherein said core is selected from the group consisting of:





13. An organic light emitting device comprising an anode, a cathode, an electron transport layer, a hole transport layer and an electron transport/hole blocking layer and an emissive layer comprising an iridium (III) complex according to claim 11 or 12.

14. The organic light emitting device of claim 13 having a theoretical device efficiency greater than 25 percent.